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Research Article

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Location Site Selection Preferences of Construction Firms that Offer Second Homes to Foreign Investors: The Case of Trabzon

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Abstract

Purpose

Being necessarily proactive, spatial plans should consider national and global developments. In Turkey, after legislative amendments of the 2000s, legal obstacles for foreign investment in house-ownership were eradicated, raising a significant demand for second homes. If the current planning process does not turn this demand into an opportunity, it will probably be one of its main threatening factors. This study aims to uncover the criteria affecting the locational choices of construction companies for their project area in supplying second homes for those investors, and rank them according to their importance.

Design/Methodology/Approach

A three-stage AHP was utilized. First, the objectives, criteria and sub-criteria affecting the locational choices of construction companies were determined and a hierarchical structure was set. Secondly, pairwise comparisons were made with the company officials. Thirdly, the relative and general weights of the criteria and sub-criteria were calculated and locational preferences for the project area were uncovered. The city of Trabzon, where the second home supply for the citizens of the countries in Arabian Peninsula increased after 2012, was chosen as the case.

Findings

It is concluded that the development plan decisions are very effective in the locational selection of the project areas. The most important criteria in the selection process are found to be the nearby plan decisions, high unit/m^2 sale price of flats, and plan decisions on the parcel, in turn. Moreover, the ones for the sub-criteria were found to be having nearby a CBD plan decision, development order, and having a nearby recreational area plan decision, in turn.

Research Limitations/Implications

Although there are many such construction companies, only two company officials volunteered to participate, yet the study still provides a basis for future work and an awareness for international dynamics of the city.

Originality/Value

The criteria affecting the locational choices of construction companies for their project area in supplying second homes for foreign investors were revealed and ranked. Pairwise comparisons in AHP were made simultaneously with the participants using a videoconference application, considering the risk of Covid-19. The study contributes to housing supply literature and guide spatial plans by introducing locational preferences of the firms.

Keywords: *AHP, housing supply to foreigners, location site selection, second home*

INTRODUCTION

Ersoy (2017) states that spatial planning should be a future-oriented design, that it should be done in order to achieve certain objectives/goals and that it should create a systematic action sequence. It is expected that spatial plans prepared with 15-20-year objectives predict and direct the housing supply and demand within the market mechanism in order to have the right information infrastructure. Otherwise, the process which is left to free market conditions may cause unplanned and unforeseen situations to arise in the designs, objectives/goals and action sequences of the current spatial plans. These unplanned and unforeseen developments may result in changes that will cause the plan become obsolete, or the sector produces its own solutions within the market mechanism. In both cases, this is a failure of the planning and the plan in a sense, as an urban development has emerged which the plan did not foresee.

Homes that foreigners buy outside of their own country are called second homes. Second home is defined in the Glossary of Urban Science Terms as "a unit of residence that people use in their vacations or short-term trips apart from their homes where they live permanently" (Keleş, 2009). The main characteristics of the second homes that make them different from the first houses where households live permanently are said to be: The duration of use, frequency of use, their functions (suitability for recreational purposes such as entertainment, resting, having a holiday, etc.) (Karaaslan and Yalçıner Ercoşkun, 2005) and their location. In general, second homes are located on the coasts where the tourism sector is developing and in regions with high natural qualities (Coppock, 1977; Huang and Yi, 2011; Kaltenborn and Clout, 1998; Nepal and Jamal, 2011; Overvag and Berg, 2011) and are located close to urban settlements (Bakırcı, 2007; Gündüz, 2003; Mizan, 1994).

There have been two important turning points in the legal amendments about foreigners' acquisition of real estates in Turkey. The first of these is the removal of the article which prohibited foreigners from acquiring real estates in villages from the Village Law in 2004. The second is the abolition of the principle of reciprocity in 2012, which had been in the Land Registry Law since the foundation of the In terms of foreigners' acquisition of immovable properties, the principle of reciprocity means if Turkish citizens have the right to acquire immovable properties in one country, the citizens of that country also have the right to acquire immovable properties in Turkey. In 2012, this principle was abolished and the authority to determine which country citizens could buy houses in Turkey was given to the Council of Ministers. From that year on, the citizen of countries that were not granted the right to acquire immovable properties in Turkey were granted the right to acquire immovable properties in Turkey. With the granting of this right, the citizens of the countries in the Arabian Peninsula started to buy high quantities of houses in Turkey. Table 1 shows the number of houses purchased by foreigners between 2015 and 2020 by country. While the total number of

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second homes purchased by foreigners between 2015 and 2017 was around 20,000, it doubled in 2018, and reached approximately 41,000 in 2020 despite the pandemic. Iraqi citizens are those who bought the most second homes; in general, the citizens of the Arabian Peninsula demanded second homes; and the citizens of Germany and England from among European countries were among the top ten in the ranking. It is estimated that some of the foreigners who bought second homes in Turkey bought second homes in Turkey due to the security concerns in their own countries.

Table 1. Number of houses purchased by foreigners between 2015 and 2020 by country (Turkish Statistical Institute (TURKSTAT), 2021)

2015		2016		2017	
Iraq	4228	Iraq	3036	Iraq	3805
SaudiArabia	2704	SaudiArabia	1886	SaudiArabia	3345
Kuwait	2130	Kuwait	1744	Kuwait	1691
Russia	2036	Russia	1224	Russia	1331
Un.Kingdom	1054	Afghanistan	1205	Afghanistan	1078
Germany	869	Un.Kingdom	827	Azerbaijan	942
Azerbaijan	815	Germany	714	Un.Kingdom	794
Iran	744	Iran	664	Iran	792
Afghanistan	656	Azerbaijan	610	Germany	772
Ukraine	608	Ukraine	484	Egypt	587
Other	7147	Other	5997	Other	7291
Total[1]	22991	Total[1]	18391	Total[1]	22428
2018		2019		2020	
Iraq	8205	Iraq	7596	Iran	7189
Iran	3652	Iran	5423	Iraq	6674
SaudiArabia	2718	Russia	2893	Russia	3078
Russia	2297	SaudiArabia	2208	Afghanistan	1929
Kuwait	2199	Afghanistan	2191	Azerbaijan	1279
Afghanistan	2084	Kuwait	1903	Germany	1265
Germany	1866	Germany	1723	Kuwait	1231
Jordan	1362	Jordan	1596	Yemen	1181
Azerbaijan	1250	Yemen	1564	Kazakhstan	1171
Un.Kingdom	1237	Un.Kingdom	1353	Un.Kingdom	1126
Other	13174	Other	17517	Other	15175
Total[1]	40044	Total[1]	45967	Total[1]	41298

[1] TURKSTAT explains that the difference in the total number of houses purchased by foreigners in Tables 1 and 2 is due to the fact that different nationalities can buy the same house.

Before 2012, rather the citizens of European Union member states bought individual sections in the Aegean, Mediterranean and Marmara coasts in Turkey (Görer Tamer, Erdoğanaras, Yüksek and Güzey, 2010). A large part of the total number of houses sold to foreigners in Turkey between 2013 and 2020 was in Istanbul and Antalya provinces (Table 2). Antalya is the province where most houses were bought between 2019 and 2014, and İstanbul is the province where most houses were bought between 2019 and 2020. Before 2012, Turkey was rather preferred by the EU citizens, and with the legal amendments some previously undemanded provinces started to be preferred. Of these, Yalova, Trabzon and Sakarya provinces have become prominent. Due to the pandemic (Covid-19) in 2020, the house demand of the citizens of the countries in the Arabian Peninsula in these provinces was interrupted; however, it is anticipated that this demand will continue in the future. Estimating,

directing and turning the investments into opportunities in order to meet this demand is a planning problem; for, if the current plans do not turn this into an opportunity, there is a risk that this will turn into an element that will threaten the current plans.

Table 2. Number of houses bought by foreigners between 2013 and 2020 by provinces (TURKSTAT, 2021)

2013		2014		2015		2016	
Antalya	5548	Antalya	6542	İstanbul	7493	İstanbul	5811
İstanbul	2447	İstanbul	5580	Antalya	6072	Antalya	4352
Aydın	1112	Aydın	1191	Bursa	1501	Bursa	1318
Muğla	1053	Muğla	1051	Yalova	1425	Aydın	871
Mersin	545	Bursa	954	Aydın	1107	Yalova	822
Bursa	375	Mersin	783	Sakarya	833	Trabzon	810
Yalova	284	Yalova	765	Muğla	830	Sakarya	657
İzmir	194	Sakarya	512	Trabzon	778	Muğla	632
Ankara	175	Ankara	369	Mersin	717	Ankara	623
Sakarya	103	Trabzon	225	Ankara	599	Mersin	580
Other	345	Other	987	Other	1475	Other	1713
Total	12181	Total	18959	Total	22830	Total	18189
2017		2018		2019		2020	
İstanbul	8182	İstanbul	14270	İstanbul	20857	İstanbul	19175
Antalya	4707	Antalya	7938	Antalya	8951	Antalya	7735
Bursa	1474	Bursa	2720	Ankara	2539	Ankara	2746
Yalova	1079	Ankara	2133	Bursa	2213	Bursa	1340
Trabzon	978	Yalova	2063	Yalova	1696	Yalova	1321
Aydın	826	Sakarya	1366	Sakarya	1247	Mersin	1313
Ankara	817	Trabzon	1344	Muğla	957	İzmir	908
Sakarya	770	Aydın	1070	Trabzon	935	Samsun	880
Muğla	634	Mersin	1022	Samsun	885	Sakarya	864
Mersin	600	Samsun	956	Aydın	837	Muğla	745
Other	2167	Other	4781	Other	4366	Other	3785
Total	22234	Total	39663	Total	45483	Total	40812

In this study, AHP from Multi-Criteria Decision-Making Support Systems (MCDMSS) was employed to determine the building site preference priorities of construction companies that build and sell second homes for Arab Investors.

In the first stage, by using the literature and the characteristics of the field of work, the objectives, criteria and sub-criteria affecting the location preferences of the two construction companies that supply houses to the citizens of the countries in the Arabian Peninsula were determined, and a hierarchical structure was created in accordance with the AHP technique. The first level of this hierarchical structure contains the goals, the second level contains the objectives, the third level contains the criteria and the fourth level contains the sub-criteria. In the second stage, pairwise comparisons were made in accordance with the AHP. These pairwise comparisons were made by one official from each of the two construction companies under the supervision of the authors of the present study. In the third stage, the relative and general weights of the criteria and sub-criteria were calculated and the project area location site selection preferences were revealed.

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LITERATURE REVIEW

In the literature, there are studies that deal with the issue of second house acquisition by foreigners from different perspectives. These studies mostly focus on foreigners who want second houses, on the characteristics of the demands, and on the effects of the second home acquisition on the area. A limited number of studies have been conducted on the relationship between second home location selection of foreigners and spatial planning.

Studies focusing on the demand for second house acquisition by foreigners generally focused on the characteristics of foreigners and the reasons for acquiring a second house and established their relationship with migration (Breuer, 2005; Farstad and Rye, 2013; Müller, 2002; Müller and Roger, 2011; Norris and Winston, 2010). It is possible to categorize studies on the effects of second house acquisition as economic, social and physical effects. Studies investigating the economic effects mostly examined the changes in house prices and the contribution of foreigners to the local economy (Avcı, Avcı and Şahin, 2008; Bohlin, 1982; Guest and Rohde, 2017; Karakaya and Turan, 2006; Paris, 2017; Südaş and Mutluer, 2008; Wokker and Swieringa, 2016). In studies on social impacts, studies were conducted on how foreigners' second house acquisition affects local identity and the relations between local people and foreigners (Casado-Diaz, 2009; Gustafson, 2008; Hall and Müller, 2004; Nudralı, 2007; O'Reilley, 2001; Rye, 2011). Studies examining the physical effects focused on the protection of natural areas, on the change of existing construction, and on the relationship with urban planning (Alipour, Olya, Hassanzadeh and Rezzapouraghdam, 2017; Bakırcı, 2007; Erdoğanaras, Güzey, Görer Tamer and Yüksel, 2005; Görer Tamer *et al.,* 2010; Gündüz, 2003; Mizan, 1994; Rovira Soto and Clave, 2017; Zoğal and Emekli, 2018). In the literature, while there are limited studies on the second house location selection of foreigners (Gauder, Houssard and Orsmond, 2014; Lipkina, 2013), there are more studies on the location selection of second houses (Burby III, Donelly and Weiss, 2007; Kaltenborn and Clout, 1998; Li and Fan, 2020; Manaugh and El-Geneidy, 2013; Stewart and Stynes, 1995). In addition, studies on second house location selection are more demand-oriented and studies on supply are limited (Gallent and Tewdwr-Jones, 2001).

Studies conducted in Turkey usually focused on the Aegean and Mediterranean Regions, where the citizens of European Union countries acquired second houses (Avcı *et al.,* 2008; Bakırcı, 2007; Erdoğanaras *et al.,* 2005; Görer Tamer, Erdoğanaras, Güzey and Yüksel, 2006; Görer Tamer *et al.,* 2010; Karakaya ve Turan, 2006; Mizan, 1994; Nudralı, 2007; Südaş ve Mutluer, 2008; Yirik ve Baltacı; 2016). These studies mostly focused on the immigration of foreign pensioners and its effects. Studies on the citizens of Arab countries who have acquired the right to house acquisition in our country after 2012 and the cities where they have acquired second houses are limited (Alkan Gökler, 2021; Ünlü Öztürk and Yılmaz Bayram, 2021). This study aims to determine the criteria for the

project area location selection of the construction companies that supply second houses to foreigners and to rank them according to their importance. It is hoped that it will fill an important gap in the literature and will contribute to the planning practice.

RESEARCH METHOD

Field of Work

In this study, the urban region of Trabzon was chosen as the sample field of work (Figure 1). The urban region includes Ortahisar—the central district of Trabzon—, the district of Yomra in the east and the district of Akçaabat in the west. The urban region of Trabzon has developed in a linear macro form parallel to the coast and this development still continues.

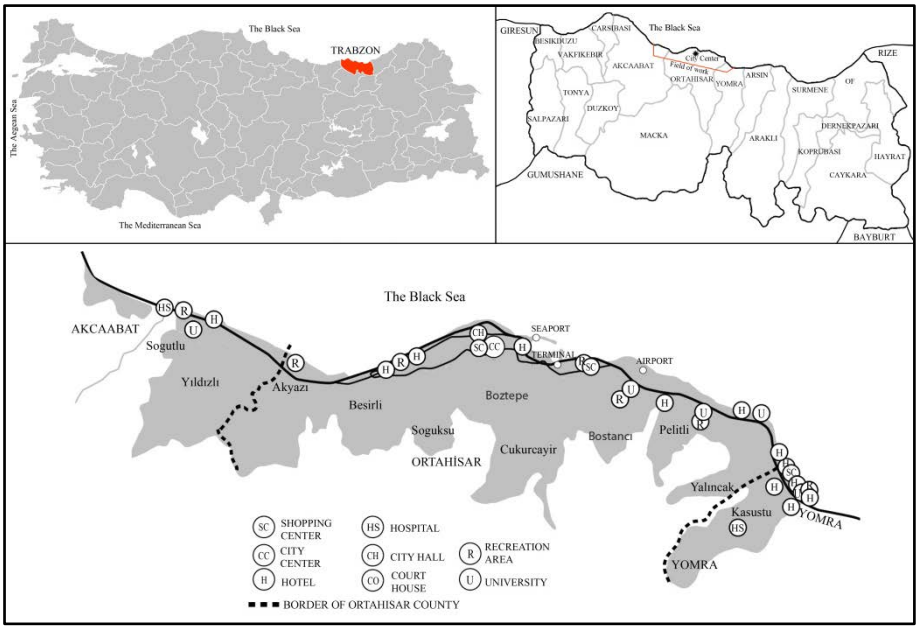

Figure 1. The location of the urban region of Trabzon – the field of work – within the country and the province.

Many construction companies have been building second homes for Arab investors in recent years in the urban region of Trabzon, and Arab investors buy houses. In Trabzon, during the years when the acquisition of houses of the citizens of the countries in Arabian Peninsula increased, the promotions and advertisements of house projects were made in Arabic. In terms of second home investments, the eastern border neighborhood of Ortahisar district, Yalıncak, and Kaşüstü neighborhood of Yomra district stand out (Ünlü, 2018).

Method

This study employed the AHP technique, one of the Multi-Criteria Decision-Making (MCDM) methods. MCDM is a decision-making support system that offers systematic methods in the analysis of complex decision-making problems. The stages of this analytical system consist of the following respectively: dividing the decision-making problem into small and understandable pieces, analyzing each piece, and attaining a

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result by combining the pieces within a certain logic (Malczewski, 1999). The MCDM techniques allow decision-makers to make an analytical decision in the evaluation, selection and ranking of alternatives (Voogd, 1983). MCDM techniques and Geographic Information Systems (GIS) were integrated with each other, and since the 1980s, this integrated system has been widely used in the distribution of environmental and natural resources, transportation, urban and regional planning, waste management, hydrology, and soultion of the problems in agriculture and forestry (Malczewski, 2006). The MCDM techniques are divided into two groups as Multi-Attribute Decision-Making (MADM) and Multi-Objective Decision-Making (MODM) techniques.

MADM is a decision-making support system in which many different criteria are used together for a single purpose (Carver, 1991; Voogd, 1983). Using different criteria together is one of the most important advantages of the technique. The MADM techniques are widely used in the preparation of a land suitability map for any type(s) of land use, or location selection of any facility (Dai, Lee and Zhang, 2001; Pereira and Duckstein, 1993), and in ordering and selecting a limited number of predetermined alternatives in planning (Carver, 1991; Türk, 2018; Zucca, Sharifi and Fabbri, 2007). AHP, Analytical Network Process, Vikor, Topsis, Mora, Electre, Promethee are some of the MADM techniques. The MODM techniques are operational/mathematical programming used to determine the optimum alternative when the alternatives are infinite and unlimited (Çelik and Türk, 2011; Silva, Alçada-Almeida and Dias, 2017; Türk and Çelik, 2013; Türk and Zwick, 2019).

Developed by Saaty (1980), AHP is a flexible, useful, packaged software and is widely used in spatial planning problems (Banai-Kashani, 1989; Carver, 1991; Türk, 2018). Many criteria are effective in the project area location selection of construction companies that supply second houses to foreign investors. Most of these criteria do not have a measurement unit, and the measurement units of the criteria that have measurement units are not comparable with each other. AHP was used in this study as it allows to calculate the relative and general weight of the criteria by making a pairwise comparison of criteria that do not have a unit of measurement and have different units of measurement. Another advantage of AHP is that it offers an analytical and hierarchical approach to breaking down very complex decision problems into parts.

The AHP includes three principles and stages as decomposition, pairwise comparative judgment, and synthesis of priorities (Saaty, 1980; Malczewski, 1999). The first stage in AHP is to divide the decision-making problem into hierarchy. In general, the hierarchical structure is as follows: goals, objectives, criteria/attributes, sub-criteria and alternatives. Depending on the purpose of the study, the number of levels and order in the hierarchy may change. Because the purpose of this study is to rank the criteria and sub-criteria in order of importance, alternatives are not included.

The second stage is the pairwise comparisons of decision elements. Pairwise comparisons in the AHP are the main measure. In the pairwise comparison matrix, each criterion is compared with other criteria according to its component one level higher. When making comparisons according to the importance levels in Table 3, if the criterion in the row of the comparison matrix is more important than the criterion in the column, it takes a value between 1 and 9. Conversely, when the criterion in the column is more important than the criteria in the row, it takes a value between 1/2 and 1/9 (Table 3). As a result of the pairwise comparisons, the eigenvector corresponding to the largest eigenvalue of the matrix expresses the relative priorities of the criteria. Thus, a weight vector reflecting the relative importance of various criteria is obtained.

Table 3. Pairwise comparison scale (Saaty, 1980)

Level of importance	Interpretation	Explanation
1	Equal importance	Two activities contribute equally to the objective
3	Moderate importance of one over another	Experience and judgment moderately favor one activity over another.
5	Essential or strong importance	Experience and judgment strongly favor one activity over another
7	Very strong importance	An activity is strongly favored and its dominance is shown in practice
9	Extreme importance	The evidence favoring one activity over another is of the highest possible order of affirmation
2, 4, 6, 8	Intermediate values	Values between two consecutive judgments to be used when compromise is needed

When making pairwise comparisons, the scores given by the decision maker must be compatible with each other. To ensure the consistency of subjective perceptions and the accuracy of relative weights, two coefficients, the Consistency Index (*CI*) and the Consistency Ratio (*CR*), are used. To test the compatibility, CR is calculated for each comparison matrix. The consistency ratio is used to express the probability of random generation of matrix decisions (Saaty, 1980). The following formula is used to calculate CI.

$CI=(\lambda max-n)/(n-1)$

Here, *CI* denotes the index of consistency and shows the deviation from consistency. λmax is the biggest eigenvalue of the matrix, and n is the number of elements (criteria/subcriteria) in the matrix.

The CR is calculated with the following formula:

$CR=CI/RI$

Here, *RI* represents the random value index (Table 4). Table 4 shows the *RI* values according to different element numbers (n).

Table 4. Random value index (Saaty, 1980)

n: Random	1	2	3	4	5	6	7	8	9	10
Value Index	0	0	0.52	0.89	1.11	1.25	1.35	1.40	1.45	1.49

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A CR of 0.1 or less is a reasonable consistency level. Otherwise, a consistency ratio above 0.1 would require revision of significance levels in the matrix due to inconsistent evaluation. That 7±2 criteria/sub-criteria are at comparable level in each comparison matrix is indicated. If the criteria/sub-criteria are more than 9, it is recommended that they be divided into subgroups (Saaty, 1980).

The third step is the calculation of the overall (combined) weights. The relative weights of the levels that were calculated in the second step are combined to obtain the overall weights. For this, the relative weight of each criterion or sub-criterion must be multiplied by the relative weight of the relevant criterion or sub-criterion and the objective at each level in a hierarchical manner from the bottom to the top. These values show the relative weight of criteria or sub-criteria relative to the overall objective (Saaty, 1980; Malczewski, 1999). In the present study, a Microsoft Excel© template was developed to implement the AHP algorithm.

In this study, a three-stage process was used. In the first stage, the AHP hierarchy was established by revealing the criteria that affect the location preferences of companies that supply houses to foreign investors In the second stage, the decision-making elements in the AHP hierarchy were compared pairwise by the construction company officials who supplied housing to foreigners in the city of Trabzon. In the last stage, the general weights of the decision-making elements were calculated, and the effects of the criteria and sub-criteria on place selection preferences were revealed.

The first stage: Creating the AHP hierarchy

In line with the aim of the study, the goal at the first level of the AHP hierarchy was determined as "the project area location site selection preferences of construction companies that supply houses to Arab investors". The second level contains the objectives, and three objective have been determined by using the literature. These are (1) Consumer demand, (2) Development plan and developed site, and (3) Cost and profit. At the third level, there are criteria under each objective, and at the fourth level, there are sub-criteria under each criterion. Criteria and sub-criteria were determined by taking into consideration the relevant literature and the characteristics of the field of work.

Under the objective of consumer demand are the criteria of proximity to natural areas (Prx. to natural areas), view, presence of foreign investors in the region (Prs. foreign investor) and proximity to functions in the city (Prx. func. in the city). Under the criterion of proximity to natural areas are the sub-criteria of proximity to the sea, lake, stream, creek, forest and agricultural areas; Under the view criterion are the sub-criteria of sea view, city view and natural area view; under the criterion of proximity to functions in the city are the sub-criteria of proximity to shopping malls, touristic areas, the city center and the airport (Figure 2).

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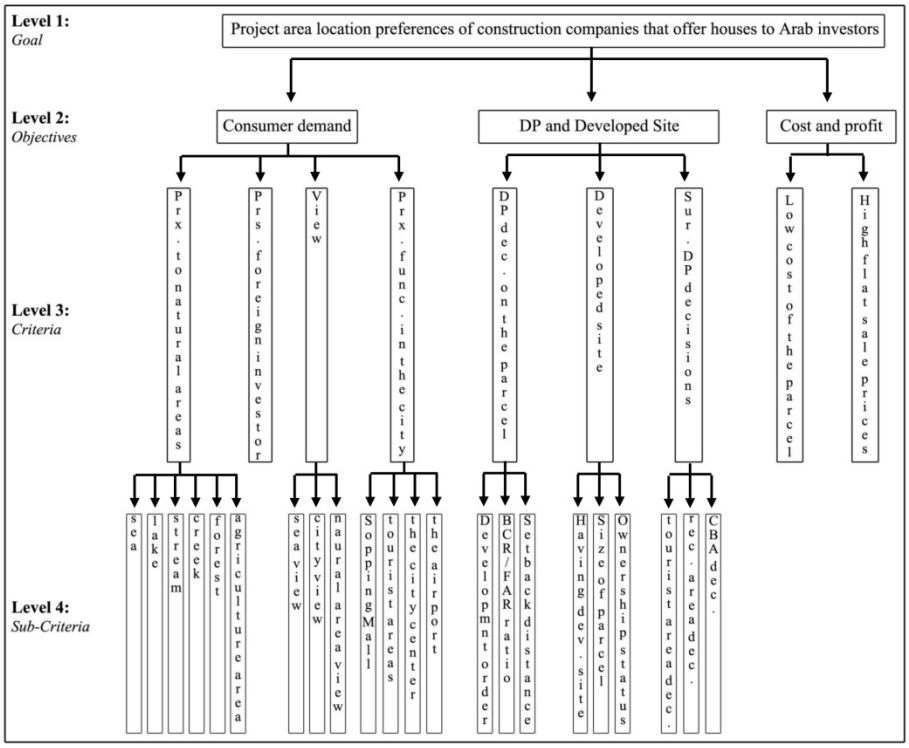

Figure 2. The hierarchy of project area site selection and preferences of construction companies that supply houses to Arab investors.

The locations demanded by foreigners for their houses are a guide for construction companies. In general, it is stated that proximity to water (sea, creek, and lake) and green (forest, agricultural areas, natural areas) is of great importance in the second home demands of foreigners (Casado-Diaz, 1999; Ünlü, 2018). In addition, foreigners usually prefer to buy houses in places they have visited and liked as tourists, and their experiences with the city affect them. In this context, proximity to touristic places also emerges as important for the choice of house site (Bakırcı, 2007). In addition to the specified criteria, foreigners mostly prefer to be close to their relatives and acquaintances when buying a house. In this respect, proximity to the places where foreigners that have previously acquired houses in the region live is also effective in the demand (Casado-Diaz, 1999; Hall and Müller, 2004). Another important point is said to be transportation connections. In the acquisition of the second home, the distance between the first and the second home determines the type of transportation and the duration of use (Bakırcı, 2007; Bell and Ward, 2000; Gündüz, 2003; Mizan, 1994). If the distance is short, private vehicles are used; as the distance increases, other means of transportation such as buses, trains and planes are preferred. In the acquisition of the second homes by foreigners, since they travel from one country to another, especially the places that are close to the airport become important. Because the officials that were interviewed stated that foreigners want to be close to areas such as shopping malls and city centers where they can meet their needs in the areas where they buy houses for touristic purposes, proximity to these two functions were also included in the hierarchy as sub-criteria.

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Under the development plan and developed site (DP and Developed Site) objectives are also the criteria of development plan decisions on the parcel (DP dec. on the parcel), developed site, and development plan decisions in its immediate surroundings about the parcel (Sur. DP Decisions). Under the criterion of development plan decisions on the parcel are the sub-criteria of development order, Building Coverage Ratio (BCR) / Floor Area Ratio (FAR) and set-back distances; under the developed site criterion are sub-criteria of having developed site on the parcel (Having dev. site), size of parcel and ownership status; under the criterion of development plan decisions in its immediate surroundings about the parcel; having a tourism area plan decisions in its immediate surroundings (tourist. area dec.), having a recreational area plan decision in its immediate surroundings (rec. area dec.), and having a central business area plan decision in its immediate surroundings (CBA dec.) were determined as the sub-criteria (Figure 2).

The development order in the current implementation development plan of the real estate to be projected is important in terms of the development rights granted to the real estate. These rights involve the BCR and FAR, which indicates the total construction area, and setback distance. In her study, Ünlü (2018) found that immovable with a FAR decision on the plan are preferred, especially in the implementation plan. On a parcel planned in FAR, because vertical development is permitted by reducing the BCR without changing the FAR, the yard becomes larger, and this allows the yard to be used for such common functions as parking lot, green area, pool, etc. The authorities that were interviewed stated that another reason for preference is that the immediate surroundings of the second homes that the foreigners will use for entertainment and holiday purposes has, with all its functions, a planned tourism area or a central business area or a recreation area. That an immovable has been implemented a a developed site in accordance with Article 18 of the Zoning Law No. 3194 indicates that the necessary public areas have been abandoned from the cadastral parcel to the public areas within the scope of the participation share of readjustment, the immovable will not be abandoned again, and the immovable has reached the stage of obtaining a building license. That an immovable property is owned by one person is an advantage over a multi-ownership in resolving a future dispute after the owner of the immovable has made a contract with the contractor. In this context, ownership status is also important (Çağla, 2007).

Under the cost and profit objective, there are such criteria as low cost of the parcel and high flat unit/m^2 sale prices. With these criteria, the investor makes a cost-profit comparison. While choosing the location of the housing area, the areas with low land costs are preferred primarily (Meyer and Gomez – Ibanez, 1981). Especially after the second half of the 20th century, with the development of transportation technologies, living close to the city center has become less important and low-cost lands in the periphery of cities have started to be preferred. In this context, low land prices are important for the choice of housing area. Another

important point is the high house unit price/m^2 after the project is prepared (Kocatürk Özcan, 2006).

The second stage: Pairwise comparisons of decision elements

Pairwise comparisons were made in accordance with the hierarchy created in the first stage. Pairwise comparisons were made by the construction company officials that produce second homes for Arab investors. Between 2012 and 2017, when foreigners' house acquisition was high in Trabzon, the companies that promoted housing projects on the internet and the number of projects they produced were determined (Ünlü, 2018). It was found that 75% of the housing projects were produced by only 6 companies and 25% by 31 companies. Then, 6 company representatives were contacted. Of the 6 companies, two agreed to participate in the study. An official from each of the two construction companies, who agreed to participate in the study, made pairwise comparisons, in the form of a group meeting, using a videoconference application. In the videoconference, the group was first informed about the aim of the study, the scoring system and AHP. Then, they made pairwise comparisons. In pairwise comparisons, the scores given by the group in agreement were entered into the comparison matrices simultaneously by one of the authors of the study. Pairwise comparisons were made by considering the related goal, objective and criterion at the next higher level.

The third stage: Calculation of priority values of decision elements

In the third step, first the relative weights of the objectives, criteria and sub-criteria, then the general weights of the criteria and sub-criteria were calculated. The relative weight of each criterion was multiplied by the relative weight of the respective objective in the higher hierarchy. Thus, the overall weight of each criterion was calculated. The relative weight of each sub-criterion was multiplied by the relative weights of the corresponding criterion and objective in the upper hierarchies, respectively. Thus, the overall weight of each sub-criterion was calculated.

RESULTS

The relative weights of objectives in the second level of the hierarchy were calculated by pairwise comparison. Of the objectives, the weight value of consumer demand was found to be 0.105, of development plan and developed site 0.637, and of cost/profit 0.258.

In the next step, the relative weights of the criteria under each objective at the second level were calculated (Table 5). Under the consumer demand objective, the criterion of view; under the development plan and developed site objective, the criterion of development plan decisions in its immediate surroundings about the parcel; and under the cost/profit objective, the criterion of high flat unit/m^2 sale price received the highest relative weights. At the third level, under each criterion, proximity to the

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sea, sea view, proximity to the city center, development order, ownership status and the having a central business area plan decision in its immediate surroundings are the sub-criteria that received the highest relative weights. These sub-criteria received at least more than half of the total score in each single pairwise comparison.

Table 5. Relative weights of objectives, criteria and sub-criteria

Objectives (Obj.)	Obj. weight	Criteria (Cri.)	Cri. weight	Sub-criteria	Sub-cri. weight
Consumer demand	0.105	Proximity to natural areas	0.046	Proximity to the sea	0.584
				Proximity to the lake	0.099
				Proximity to the stream	0.099
				Proximity to the creek	0.081
				Proximity to the forest	0.081
				Proximity to agricultural areas	0.056
		View	0.573	Sea view	0.731
				City view	0.081
				Naural area view	0.188
		Presence of foreign investors in the region	0.110		
		Proximity to the functions in the city	0.271	Proximity to shopping mall	0.243
				Proximity to tourist areas	0.049
				Proximity to the city center	0.607
				Proximity to the airport	0.101
Development plan and developed site	0.637	Development plan decisions on the parcel	0.243	Development order	0.818
				BCR/FAR ratios	0.091
				Set-back distances	0.091
		Developed site	0.088	Having a developed site on the parcel	0.055
				Size of parcel	0.290
				Ownership status	0.655
		Development plan decisions in its immediate surroundings about the parcel	0.669	Presence of an immediate surrounding having a tourist area planning	0.063
				Presence of an immediate surrounding having a recreation area planning	0.265
				Presence of an immediate surrounding having central business area planning	0.672
Cost and profit	0.258	Low cost of the parcel	0.125		
		High flat unit/m^2 sale prices	0.875		

It should be born in mind that the consistency index should be below 0.1 in pairwise comparisons. Since the consistency index was below 0.1 in all pairwise comparisons, there was no need to revise the pairwise comparisons.

In the next stage, the overall weight of each criterion was calculated. These weights were obtained by multiplying the relative weight of each criterion by the relative weight of the objective (Table 6). development plan decisions in its immediate surroundings about the parcel, high flat unit/m^2 sale price and development plan decisions on the parcel have been the criteria with the highest overall weights.

Table 6. Overall weight ranking of the criteria

Sequence	Criteria	Overall Weight
1	Development plan decisions in its immediate surroundings about the parcel	0.426153
2	High flat unit/m² sale prices	0.225750
3	Development plan decisions on the parcel	0.154791
4	View	0.060165
5	Developed site	0.056056
6	Low cost of the parcel	0.032250
7	Proximity to the functions in the city	0.028455
8	Presence of foreign investors in the region	0.011550
9	Proximity to natural areas	0.004830

In the last stage, the general (global) weight value of each single sub-criterion was calculated. The relative weight of a sub-criterion was multiplied by the relative weights of the corresponding criterion and objective in the upper hierarchies respectively, and thus the overall weight of each sub-criterion was calculated. As seen in Table 7, the sub-criterion of the 'having a central business area plan decision in its immediate surroundings,' the sub-criterion of 'develoopment order,' and the sub-criterion of the 'having a recreational area plan decision in its immediate surroundings' have the highest general weights. The total weight of these three sub-criteria is equal to 0.525925, which is approximately equal to the total weight of the remaining 19 sub-criteria. In other words, it can be said that these three sub-criteria are determinant in the choice of location of the project area. While the construction company officials were making the pairwise comparisons, they stated that foreigners want to meet their needs from the close environment. The findings of the study support the actual situation; because the construction companies that produce houses for Arab investors in Trabzon mainly prefer locations in Kaşüstü and Yalıncak regions (Ünlü, 2018). In the last 10 years, tourism facilities, shopping malls, functions requiring large area use and commercial areas have been built in the Kaşüstü and Yalıncak regions, and this region continues to develop as a sub-center (Figure 1). The proximity of the region to the city center, airport and sea has increased its attraction. On the other hand, the development order in the implementation development plan provides great flexibility to the construction companies in the projects to be realized and enables them to increase their profits. The construction company officials stated that in the parcels having a FAR planning, reducing the BCR permits vertical construction without changing the total construction area. In this case, they stated, such recreational areas as parks, swimming pools, sports fields etc. can be built on the unbuilt part of the parcel, which increases the attractiveness of the project. Regarding the ownership status, which is at the top of the general weight ranking, it was stated that the parcels owned by one person are preferred because there are difficulties with the joint-owned parcels both during the agreement period and afterwards.

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Table 7. Overall weight ranking of sub-criteria

Sequence	Sub-criteria	Overall weight
1	Having a central business area plan decision in its immediate surroundings	0.286375
2	Development order	0.126619
3	Having a recreational area plan decision in its immediate surroundings	0.112931
4	Sea view	0.043981
5	Ownership status	0.036717
6	Having a tourism area plan desicions in its immediate surroundings	0.026848
7	Proximity to the city center	0.017272
8	Size of parcel	0.016256
9	BCR/FAR ratios	0.014084
10	Set-back distances	0.014084
11	Naural area view	0.011311
12	Proximity to shopping mall	0.006915
13	City view	0.004873
14	Having a developed site on the parcel	0.003083
15	Proximity to the airport	0.002874
16	Proximity to the sea	0.002821
17	Proximity to tourist areas	0.001394
18	Proximity to the lake	0.000478
19	Proximity to the stream	0.000478
20	Proximity to the creek	0.000391
21	Proximity to the forest	0.000391
22	Proximity to agricultural areas	0.000270

The control mechanism of the administrations on the housing area location selection of the construction companies is the spatial plan. This study has shown that all the criteria and sub-criteria that affect the location selection of the construction companies that produce houses for Arab investors are directly or indirectly related to the spatial plans. It would be useful for city planners who are experts on spatial planning and politicians who are responsible for planning to make planning decisions by being aware of this fact.

DISCUSION AND CONCLUSIONS

Before 2012, mostly the citizens of European Union member countries bought second homes on the Aegean, Mediterranean and Marmara coasts. In 2012, the principle of reciprocity was abolished by the Council of Ministers, and therefore citizens of those countries that did not have the right to buy houses in Turkey were granted the right to buy houses. After this change, the citizens of the countries in the Arabian Peninsula began to buy large quantities of houses in Turkey. With this development, Arab investors bought many second homes in some cities such as Yalova, Trabzon and Sakarya. In these cities that are experiencing a new process, it is important to identify the demand and to direct this demand in spatial plans. Otherwise, the process that is left to free market conditions may cause unplanned and unforeseen spatial developments in the targets/purposes and action sequences of the current spatial plans.

The aim of this study is to determine the criteria and sub-criteria affecting the location preferences of construction companies that offer second

homes to the citizens of the countries in the Arabian Peninsula and to uncover their priorities. The works within this scope that shape the spatial plans will contribute to the awareness of the international dynamics of the city and the correct evaluation of these opportunities during the preparation of the plan.

The study unveiled the targets, criteria and sub-criteria affecting the location preferences of the companies that offer houses to foreigners and determined the priorities through weighing them by the construction company representatives. In the location preferences of the construction companies, the study found the following sub-criteria as determinants: development plan decisions in the immediate surroundings, high flat unit/m^2 sale price and the criteria for implementation development plan decisions for the parcel; presence of an immediate surrounding having central business area planning, development order, and presence of an immediate surrounding having a recreation area planning. This indicates that spatial planning decisions are important on the location preferences of companies. The findings of this study have shown that the development plan decisions are the main determining factor in the project area location selection of the construction companies. For this reason, while the development plans are being prepared, it is necessary to take into consideration the second house demand of the citizens of the Arabian Peninsula and the weights of the criteria in the project area location selection of the construction companies that meet this demand. Otherwise, the construction companies will continue to produce second houses for the citizens of the Arabian Peninsula in the areas with central business and recreation areas in the immediate vicinity, even if the current development plans do not foresee. On the other hand, the unplanned second house ownership of the citizens of Arabian Peninsula countries in the city may cause social and spatial problems, especially in the areas that are close to these second houses and in the city. It is necessary to produce plan decisions to reduce or eliminate these problems.

This study employed AHP from MCDMSS techniques. AHP is widely used in choosing and ranking among alternatives in very complex and multi-criteria spatial problems. For it has flexible, useful and package programs. In this study, AHP was used in ranking the criteria according to their importance by calculating the relative and general weights of the criteria and sub-criteria. Pairwise comparisons in the AHP were made by videoconferencing, taking into account the risk of Covid-19. Participants made the pairwise comparisons under the control of the authors as a group and simultaneously through videoconference very easily, in a short time, and without any problems. Within this context, preferring videoconferencing instead of face-to-face meetings reduces the risks of Covid-19 epidemic and provides great convenience in conducting the study.

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Determining and ranking the location selection criteria of Arab investors who buy or want to buy houses with the methodology used in this study is also important for planning studies.

CONFLICT OF INTEREST

No conflict of interest was declared by the authors.

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ETHICS COMMITTEE APPROVAL

Ethics committee approval was not required for this article.

LEGAL PUBLIC/PRIVATE PERMISSIONS

In this research, the necessary permissions were obtained from the relevant participants (individuals, institutions, and organizations) during the interviews.

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